SW Commands

This chapter provides SW (switch) commands for the Cisco ONS 15454 and the ONS 15600.

Note SW commands do not apply to the ONS 15327 and ONS 15310-CL.

24.1 SW-DX-EQPT

Switch Duplex Equipment

Usage Guidelines

Cisco ONS 15454, ONS 15600

This command switches a cross-connect card with the mate card within the NE.

Note If sending a mode parameter with a value other than NORM, FRCD, or NULL, the IDNV (Input, Data Not Valid) error message will be returned.

Category

Equipment

Security

Maintenance

Related Commands

ALW-SWDX-EQPT	INH-SWDX-EQPT	RTRV-ALMTH-EQPT
ALW-SWTOPROTN-EQPT	INH-SWTOPROTN-EQPT	RTRV-COND-EQPT
ALW-SWTOWKG-EQPT	INH-SWTOWKG-EQPT	RTRV-EQPT
DLT-EQPT	REPT ALM EQPT	SET-ALMTH-EQPT
ED-EQPT	REPT EVT EQPT	SW-TOPROTN-EQPT
ENT-EQPT	RTRV-ALM-EQPT	SW-TOWKG-EQPT
EX-SW-<OCN_BLSR>		

Input Format

SW-DX-EQPT:[<TID>]:<AID>:<CTAG>::[<MODE>][,];

Input Example

SW-DX-EQPT:CISCO:SLOT-1:123::FRCD;

Input Parameters

Table 24-1 SW-DX-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "25.1.13 EQPT" section on page 25-27. Identifies the equipment unit in the NE that is to be switched with it's mate
MODE	Command mode Parameter type is CMDMDE—forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied
• FRCD	Force the system to override a state where the command would normally be denied
• NORM	Execute the command normally. Do not override any conditions that could make the command fail

24.2 SW-TOPROTN-EQPT

Switch to Protection Equipment

Usage Guidelines

Cisco ONS 15454

This command performs an equipment unit protection switch.

This command is used for electrical cards (for example, DS1, DS3, DS3XM, and EC1). DS1 and DS3 cards have 1:1 and 1:N equipment protection. DS3XM and EC1 cards have only 1:1 equipment protection.

This command will switch the traffic from the working card specified in the AID to the protect card.

There is a priority for the switch to protection commands. In a 1:N protection group with N > 1, consider two working cards - A and B. Card A is switched to the protect card with the SW-TOPROTN command. If card B is pulled from the system, the protect card will carry the traffic of card B and card A will raise the FAILTOSW condition and carry traffic. When card B is replaced and the revert timer expires, card B will carry traffic and card A will switch to the protect card. The FAILTOSW condition on card A will be cleared. Note:1:N protection groups in the system are always revertive.

In a revertive protection group, the unit specified by the AID will raise the standing condition of WKSWPR if the command were executed without an error. In a non-revertive protection group, the unit specified by the AID will raise the transient condition of WKSWPR if the command were executed without an error.

The following actions will return error messages:

- Sending this command to a card that is not in a protection group will return the SNVS (Status, Not in Valid State) error message.

- Entering a <DIRN> value other than BTH or null will return an IDNV (Input, Data Not Valid) error message.
- Sending this command to a SONET (OCN) card will return an IIAC (Input, Invalid Access Identifier) error message.
- Sending this command to a missing working card will return the SWFA (Status, Working Unit Failed) error message.
- Sending this command to a protection card will return the IIAC (Input, Invalid Access Identifier) error message.
- Sending a mode parameter with a value other than NORM, FRCD, or null will return the IDNV (Input, Data Not Valid) error message.
- Sending this command to a working card when the working card has raised INHSWPR will return the SWLD (Status, Working Unit Locked) error message.
- Sending this command to a working card when the protection card has raised INHSWPR will return the SPLD (Status, Protection Unit Locked) error message.
- Sending this command to an active working card when the protect card is already carrying traffic (this only occurs in a 1:N protection group with N greater than one) will return the SNVS (Status, Not in Valid State) error message.
- Sending this command to an active working card when the protect card is failed or missing will return the SPFA (Status, Protection Unit Failed) error message.
- Sending this command to a standby working card will return the SNVS (Status, Not in Valid State) error message.

Note

- The default PROTID is the protecting unit if there is only one protection unit per protection group in the NE, otherwise a DENY error message will be responsed.
- This command only supports one value of the <DIRN> parameter - BTH or null. A command with any other value is considered an incorrect use of the command and will return An IDNV (Input, Data Not Valid) error message.
- This command is not used for the common control (TCC2/TCC2P or XCVT/XC10G) cards. A command on a common control card will return an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
- This command is not used for SONET (OC-N) cards. A command on a SONET card will return an IIAC (Input, Invalid Access Identifier) error message. To use a SONET card switching command, use the OPR-PROTNSW and RLS-PROTNSW commands.

Category Equipment

Security Maintenance

Related Commands

ALW-SWDX-EQPT	INH-SWDX-EQPT	RTRV-ALMTH-EQPT
ALW-SWTOPROTN-EQPT	INH-SWTOPROTN-EQPT	RTRV-COND-EQPT
ALW-SWTOWKG-EQPT	INH-SWTOWKG-EQPT	RTRV-EQPT
DLT-EQPT	REPT ALM EQPT	SET-ALMTH-EQPT
ED-EQPT	REPT EVT EQPT	SW-DX-EQPT
ENT-EQPT	RTRV-ALM-EQPT	SW-TOWKG-EQPT
EX-SW-<OCN_BLSR>		

Input Format

SW-TOPROTN-EQPT:[<TID>]:<AID>:<CTAG>::[<MODE>],[<PROTID>],[<DIRN>];

Input Example

SW-TOPROTN-EQPT:CISCO:SLOT-1:123::FRCD,SLOT-3,BTH;

Input Parameters

Table 24-2 SW-TOPROTN-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "25.1.13 EQPT" section on page 25-27. Specifies the working unit which will have traffic switched to protection
MODE	Mode with which the command is to be implemented.The parameter will only support the NORM value. A null value defaults to NORM. Sending the FRCD value for will generate the same switching behavior as sending the NORM value Parameter type is CMDMDE—forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied
• FRCD	Force the system to override a state where the command would normally be denied
• NORM	Execute the command normally. Do not override any conditions that could make the command fail
PROTID	Access identifier from the "25.1.20 PRSLOT" section on page 25-33. Identifies the protection unit to be switched when there is more than one protection unit within the NE. Optional
DIRN	The direction relative to the entity defined in the AID field. The direction of the switching. This command only supports the BTH value of this parameter. DIRN defaults to BTH Parameter type is DIRECTION—transmit and receive directions
• BTH	Both transmit and receive directions

24.3 SW-TOWKG-EQPT

Switch to Working Equipment

Usage Guidelines

Cisco ONS 15454

This command switches the protected working unit back to working unit.

This command is used for electrical cards (for example, DS1, DS3, DS3XM, and EC1). DS1 and DS3 cards have 1:1 and 1:N equipment protection. DS3XM and EC1 cards have only 1:1 equipment protection cards.

This command will switch the traffic from the protection card to the working card specified by the AID.

In a revertive protection group, the unit specified by the AID will clear the standing condition of WKSWPR if the command were executed without an error. In a non-revertive protection group, the unit specified by the AID will raise the transient condition of WKSWBK if the command were executed without an error.

The following actions will return error messages:

- Entering a <DIRN> value other than BTH or null will return an IDNV (Input, Data Not Valid) error message.
- Sending this command to a common control card will return an IIAC (Input, Invalid Access Identifier) error message.
- Sending this command to a SONET (OCN) card will return an IIAC (Input, Invalid Access Identifier) error message.
- Sending this command to a card that is not in a protection group will return the SNVS (Status, Not in Valid State) error message.
- Sending this command to a missing working card will return the SWFA (Status, Working Unit Failed) error message.
- Sending this command to a protection card will return the IIAC (Input, Invalid Access Identifier) error message.
- Sending a mode parameter with a value other than NORM, FRCD, or null will return the IDNV (Input, Data Not Valid) error message.
- Sending this command to a working card when the working card has raised INHSWWKG will return the SWLD (Status, Working Unit Locked) error message.
- Sending this command to a working card when the protection card has raised INHSWWKG will return the SPLD (Status, Protection Unit Locked) error message.
- Sending this command to an active working card will return the SNVS (Status, Not in Valid State) error message.

Note

- This command only supports one value of the <DIRN> parameter - BTH or null. A command with any other value is considered an incorrect use of the command and will return An IDNV (Input, Data Not Valid) error message.
- This command is not used for the common control (TCC2/TCC2P or XCVT/XC10G) cards. A command on a common control card will return an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.

- This command is not used for SONET (OC-N) cards. A command on a SONET card will return an IIAC (Input, Invalid Access Identifier) error message. To use a SONET card switching command, use the OPR-PROTNSW and RLS-PROTNSW commands.

Category

Equipment

Security

Maintenance

Related Commands

ALW-SWDX-EQPT	INH-SWDX-EQPT	RTRV-ALMTH-EQPT
ALW-SWTOPROTN-EQPT	INH-SWTOPROTN-EQPT	RTRV-COND-EQPT
ALW-SWTOWKG-EQPT	INH-SWTOWKG-EQPT	RTRV-EQPT
DLT-EQPT	REPT ALM EQPT	SET-ALMTH-EQPT
ED-EQPT	REPT EVT EQPT	SW-DX-EQPT
ENT-EQPT	RTRV-ALM-EQPT	SW-TOWKG-EQPT
EX-SW-<OCN_BLSR>		

Input Format

SW-TOWKG-EQPT:[<TID>]:<AID>:<CTAG>::[<MODE>][,<DIRN>];

Input Example

SW-TOWKG-EQPT:CISCO:SLOT-2:123::FRCD,BTH;

Input Parameters

Table 24-3 SW-TOWKG-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "25.1.20 PRSLOT" section on page 25-33. Specifies the working unit which will have traffic switched to protection
MODE	Mode with which the command is to be implemented.The parameter will only support the NORM value. A null value defaults to NORM. Sending the FRCD value for will generate the same switching behavior as sending the NORM value Parameter type is CMDMDE—forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied
• FRCD	Force the system to override a state where the command would normally be denied
• NORM	Execute the command normally. Do not override any conditions that could make the command fail

Table 24-3 SW-TOWKG-EQPT Input Parameters (continued)

Parameter and Values	Description
DIRN	The direction relative to the entity defined in the AID field. The direction of the switching. This command only supports the BTH value of this parameter. DIRN defaults to BTH Parameter type is DIRECTION—transmit and receive directions
• BTH	Both transmit and receive directions